

Title (en)

Method of monitoring blade vibration in a turbine engine

Title (de)

Verfahren zur Überwachung der Schaufelschwingungen in einer Turbine

Title (fr)

Procédé de surveillance des vibrations des aubes dans une turbine

Publication

EP 1813778 B1 20150909 (EN)

Application

EP 06256306 A 20061212

Priority

US 30292305 A 20051214

Abstract (en)

[origin: US2007132461A1] A rotor blade measurement system includes a microwave source and a probe. A directional coupler is attached to the source and the probe. A detector is attached to the directional coupler. The probe directs a microwave signal toward a rotor such that during rotation the rotor blade will pass through the path of the microwave signal. As the rotor blade passes the microwave signal is reflected back to the probe. The directional coupler separates the original microwave signal and the reflected signal. The detector then determines the energy level of the reflected signal. As each rotor blade passes the microwave signal it generates a reflected signal that can be analyzed over time. From the length and shape of the waveform of the reflected signal the amount of twisting and flutter in a rotor blade can be determined.

IPC 8 full level

G01H 1/00 (2006.01); **F01D 17/02** (2006.01); **F01D 21/00** (2006.01)

CPC (source: EP US)

F01D 17/02 (2013.01 - EP US); **F01D 21/003** (2013.01 - EP US); **G01H 1/006** (2013.01 - EP US); **G01S 13/88** (2013.01 - EP); **F05D 2260/80** (2013.01 - EP US)

Citation (examination)

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DOCDB simple family (application)

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